

Message

From: McClintic, Howard [McClintH@ctc.com]
Sent: 4/27/2018 2:38:16 PM
To: Woods, Clint [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bc65010f5c2e48f4bc2aa050db50d198-Woods, Clint]
Subject: Agreeing with the Controversial Transparency Rule
Attachments: ATT00001.txt; FINAL one page LNT project summary 10-24-17.docx; FINAL LNT Presentation of Howard McClintic.pptx



Ensuring the Future Through Innovation, Science and Technology

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Good Morning Mr. Woods,

My colleague, Dr. Robert (Bob) Golden and I knew that this Transparency Rule was coming and cheer its arrival – Bravo!

Nonetheless, I am haunted when I read the Administrator's urging: that the rule **be lasting**! There is **only one way** for this important tectonic change to meet and that is it **be mandated** by a newly formulated, independent Committee of the National Academy of Sciences (NAS). When undertaking their literature review, the NAS Committee Members and Staff will uncover a recently released, peer reviewed, highly credentialed, science-based Report that makes plain that there is a wealth of

toxicological and epidemiology data for chemicals and radiation that will readily yield reproducible as well as transparent regulations.

Administrator Pruitt is unique in recognizing that the mathematical construct that the EPA uses for assessing risk, the linear no-threshold (LNT) methodology, is of **MOST** questionable scientific validity. The LNT model was originally adopted by the National Academy of Sciences (NAS) in 1956 for radiation and in 1977 for chemicals. Because LNT-driven regulations, whether for chemicals or radiation, have, for many years, been claimed to be science-based (see <https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-113-SY-20131114-SD001%20.pdf> as well as <http://www.c-span.org/video/?327016-1/epa-administrator-gina-mccarthy-testimony-proposed-regulations>), the underlying scientific foundation for such regulations, particularly the LNT model itself, should also, by definition, reflect empirical data. If such scientific data are lacking, as they are for the LNT model, science-based regulatory methodologies (including benefit-cost analyses) for both chemicals and radiation should be updated to reflect significant advancements in scientific knowledge.

Besides introducing you to the fact that the **CTC Foundation** has empaneled a prestigious Science Committee that comprised of 15 individuals in the fields of toxicology, radiation biology, evolutionary biology, epidemiology, risk assessment, and economics; the Committee is preparing its FINAL Report that will demonstrate that there is no scientific support for the LNT model

and that ample modern data (NOT threshold models) should be the bases for regulations. In particular, the abundant data generated as part of the Department of Energy's 10 year, \$200 million Low Dose Radiation Research Program (LDRRP) will be a central element of the anticipated publication. Collectively, these and other complementary data have elucidated the cellular defense mechanisms by which humans can withstand exposure to low dose radiation without adverse effects.

I have begun to encourage the "doctors in the US Senate" (Barrasso [R-WY] and Cassidy [R-LA]) to introduce and progress legislation in the Senate that would be a companion bill to H.R. 4675, pertaining to the low dose radiation research that Doctor and US Congressman Roger Marshall (R-KS) championed. There are some modifications that Dr. Robert (Bob) Golden and I would advocate, given our respective professional experiences working at NAS, but more on that later. Our overarching Goal is shared: a paradigm shift whereby a **lasting**, scientifically valid approach for radiation and chemical risk assessment as well as for economic benefit-cost analyses be achieved.

Thank you for your time and interest.

Most sincerely yours,

Howard


Howard G. McClintic
Executive Director

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https://www.washingtonpost.com/news/energy-environment/wp/2018/04/24/pruitt-to-unveil-controversial-transparency-rule-limiting-what-research-epa-can-use/?noredirect=on&utm_term=.4f5c21b67c8c

Pruitt unveils controversial ‘transparency’ rule limiting what research EPA can use

by Juliet Eilperin and Brady Dennis by Juliet Eilperin and Brady
Dennis Email the author
Energy and Environment
April 24 at 6:09 PM Email the author



Environmental Protection Agency chief Scott Pruitt listens to President Trump address reporters before a meeting at the White House this month. (EPA-EFE/Shutterstock)

This post has been updated.

Environmental Protection Agency Administrator Scott Pruitt moved Tuesday to limit what science can be used in writing agency regulations, a change long sought by conservatives.

The proposed rule would only allow the EPA to consider studies where the underlying data is made available publicly. Such restrictions could affect how the agency protects Americans from toxic chemicals, air pollution and other health risks.

Pruitt and proponents describe the new approach as an advance for transparency, one that will increase Americans' trust and

confidence in the research on which EPA decisions are based. “Today is a red-letter day,” he told a group of supporters at agency headquarters. “The science that we use is going to be transparent. It’s going to be **reproducible**.”

But a chorus of scientists and public health groups warn that the rule would effectively block the EPA from relying on long-standing, landmark studies on the harmful effects of air pollution and pesticide exposure. Such research often involves confidential personal or medical histories or proprietary information.

The move reflects a broader effort already underway to shift how the EPA conducts and uses science to guide its work. Pruitt has upended the standards for who can serve on its advisory committees, barring scientists who received agency grants for their research while still allowing those funded by industry.

His announcement Tuesday came as the administrator faces increasing heat for ethics and management decisions — from both sides of the political aisle, with even President Trump privately voicing more concern over the growing number of allegations. Pruitt only focused on the proposed rule during his remarks, saying his agency was “taking responsibility for how we do our work and respecting process.”

He made clear he intends the new requirements to be lasting ones. “This is not a policy,” he said. “This is not a memo.”

The proposal will be subject to a 30-day comment period, EPA officials said. Scientific organizations are already campaigning to

block the rule from being finalized. Based on previous court cases, it could prompt legal challenges if implemented.

Former EPA administrator Gina McCarthy said that requiring the kind of disclosure Pruitt envisions would have disqualified the federal government from tapping groundbreaking research, such as studies linking exposure to leaded gasoline to neurological damage or a major 1993 study by Harvard University that established the link between fine-particle air pollution and premature deaths.

Scientists often collect personal data from subjects but pledge to keep it confidential. Researchers will have trouble recruiting study participants if the rule is enacted, she predicted, even if they pledge to redact private information before handing it over to the government.

“The best studies follow individuals over time, so that you can control all the factors except for the ones you’re measuring,” said McCarthy, who now directs the Center for Health and the Global Environment at Harvard’s public health school. “But it means following people’s personal history, their medical history. And nobody would want somebody to expose all of their private information.”

House Science Committee Chairman Rep. Lamar Smith (R-Tex.), who was with Pruitt during his announcement Tuesday, has for years sought to establish a similar requirement. His 2017 legislation, titled the Honest and Open New EPA Science Treatment Act, failed to pass both chambers.

Pruitt and Smith met at EPA headquarters on Jan. 9, according to Pruitt's public calendar, and an email obtained under the Freedom of Information Act indicates that the lawmaker pressed the administrator to adopt the legislation's goal as his own.

Smith made "his pitch that EPA internally implement the HONEST Act [so that] no regulation can go into effect unless the scientific data is publicly available for review," Aaron Ringel, deputy associate administrator for congressional affairs at the EPA, wrote other agency staffers. His email was obtained by the Union of Concerned Scientists, a scientific advocacy organization.

Conservatives, such as Trump EPA transition team member Steve Milloy, have long tried to discredit independent research the agency used to justify limiting air pollution from burning coal and other fossil fuels. A series of studies has shown that fine particulate matter, often referred to as soot, enters the lungs and bloodstream and can cause illnesses such as asthma and even premature death.

"During the Obama administration, the EPA wantonly destroyed 94 percent of the market value of the coal industry, killed thousands of coal mining jobs and wreaked havoc on coal mining families and communities," Milloy said in a statement, "all based on data the EPA and its taxpayer-funded university researchers have been hiding from the public and Congress for more than 20 years."

While the administration presses ahead, legal experts warn that the rule may be vulnerable to a court challenge. In unanimous decisions in 2002 and 2010, the U.S. Court of Appeals for the

District of Columbia Circuit said the EPA is not legally obligated to obtain and publicize the data underlying the research it considers in crafting regulations.

In the 2002 case, brought by the American Trucking Associations, two judges appointed by Ronald Reagan and one named by Bill Clinton wrote that they agreed with the agency that such a requirement “would be impractical and unnecessary.” The government’s defense had noted that “EPA’s reliance on published scientific studies without obtaining and reviewing the underlying data is not only reasonable, it is the only workable approach.”

A range of scientific organizations are already campaigning to block the rule from being finalized. On Monday, 985 scientists signed a letter organized by the Union of Concerned Scientists, urging Pruitt not to forge ahead with the policy change.

“There are ways to improve transparency in the decision-making process, but restricting the use of science would improve neither transparency nor the quality of EPA decision-making,” they wrote. “If fully implemented, this proposal would greatly weaken EPA’s ability to comprehensively consider the scientific evidence across the full array of health studies.”

Under the proposed rule, third parties would be able to test and try to replicate the findings of studies submitted to the EPA. But, the scientists wrote, “many public health studies cannot be replicated, as doing so would require intentionally and unethically exposing people and the environment to harmful contaminants or recreating one-time events.”

Gretchen Goldman, an expert on air pollution and research director for the organization's Center for Science and Democracy, said the rule could put some scientists in a quandary: Keeping personal health data or propriety information private would mean having their work ignored by the EPA.

"We have this incredible science-based process that works, and it has worked, by and large, even in the face of tremendous political pressures to not go with a science-based decision," Goldman said.

The Environmental Protection Network, a group of former EPA employees, issued a report Tuesday stating that many older studies — in which the original data sets were either not maintained or stored in outdated formats — would be eliminated under the proposed rule.

And while there is no estimate yet for how much it would cost EPA to obtain and disseminate studies' underlying data, the Congressional Budget Office has projected that Smith's measure, if enacted, would cost the agency \$250 million for initial compliance and then between \$1 million and \$100 million annually. A 2015 CBO analysis estimated that EPA would cut the number of studies it relies on by half because of the bill's requirements.

Geophysicist Marcia McNutt, who is president of the National Academy of Sciences, said Tuesday that she is concerned the rule would prevent the EPA from relying on the best available scientific evidence.

“This decision seems hasty,” she wrote in an email. “I would be fearful that the very foundations of clean air and clean water could be undermined.”

Yet the American Chemistry Council praised Pruitt’s effort. “Our industry is committed to working with EPA to help ensure the final rule increases transparency and public confidence in the agency’s regulations,” its statement said, “while protecting personal privacy, confidential business information, proprietary interest and intellectual property rights.”

Joel Achenbach and Dino Grandoni contributed to this report.

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Eliminating the Linear No Threshold (LNT) Model for EPA Risk Assessment



Howard G. McClintic
Executive Director

CTC Foundation

Ensuring the Future Through Innovation, Science and Technology

Goals of This Presentation

- Describe and inform about the non-science based manner by which the US EPA relies on the LNT model for risk assessment of air- and waterborne chemicals
- Make apparent the exaggerated and unrealistic risks and benefits produced by reliance on the LNT for Clean Air Act-type regulations as well as for individual chemicals
- Briefly describe the scientific data which support threshold-based approaches for both chemicals and radiation
- Emphasize that our proposed Project is the only way that could lead to the elimination of the LNT for risk assessment and benefit/cost calculations

NAS Safe Drinking Water Committee (SDWC 1977)

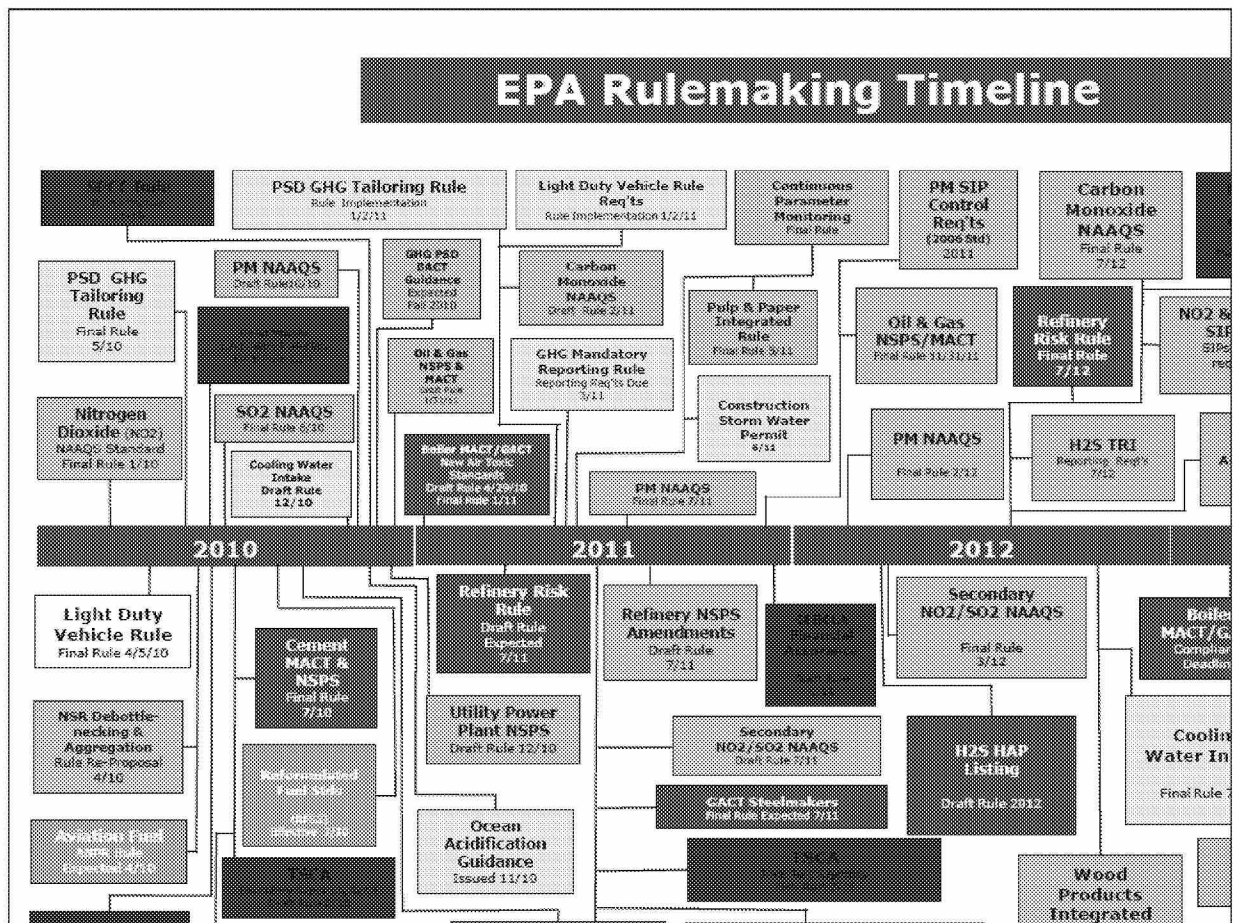
- Dr. Bob Golden worked on Vol. 1 of “*Drinking Water & Health*” (DW&H), developed for EPA as mandated by SDWA (1974).
- First time LNT model endorsed & used for chemical environmental cancer risk assessment.
- Foundationally based on radiation data for DNA mutation & cancer.

On-going Economic & Societal Consequences of LNT-Driven Regulations

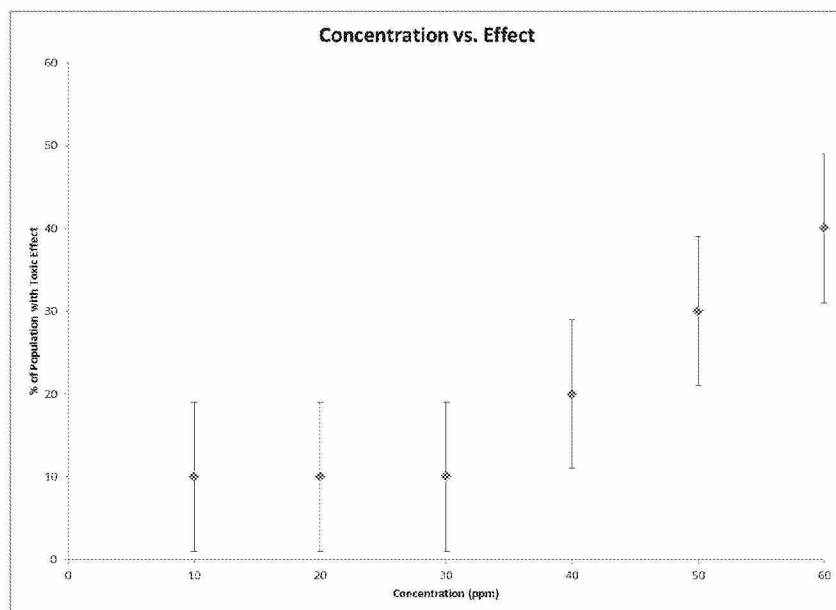
- Originally intended for exposure to radiation and cancer only; now used for chemical(s) and non-cancer risk assessment as well
- How virtually all potentially carcinogenic chemicals & radiation are regulated
- LNT plays substantial role in many regulations
- Many recent, on-going, and future EPA rulemakings have an LNT-driven component
- Staggering economic consequences and costs

The LNT is Involved in These Five Major Rulemakings Impacting the Power Sector

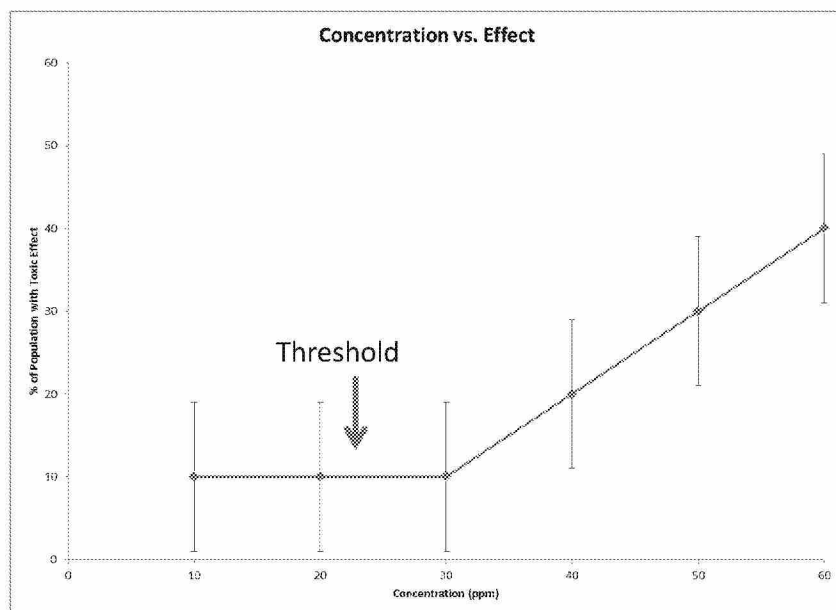
	Plants Affected	2013	2014	2015	2016	2017	2018	2019	2020+
SO ₂ & NO _x (CAIR)	Existing+New			CAIR Replacement?					
Air Toxics (MATS)	Existing+New				Full Implementation				
Cooling Water Intake	Existing+New								
Coal Ash (CCR and ELG)	Existing+New								
Greenhouse Gas NSPS	New								



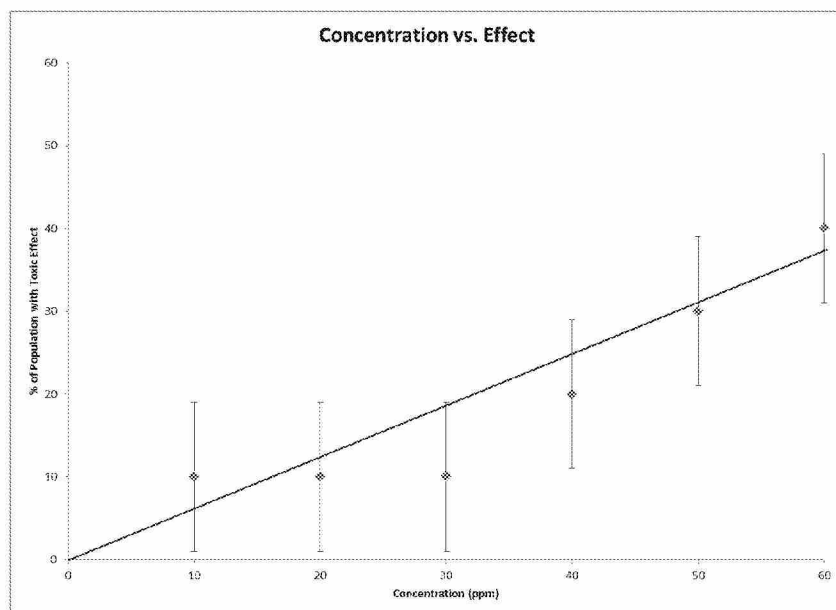
Typical Dose-Response Data Set



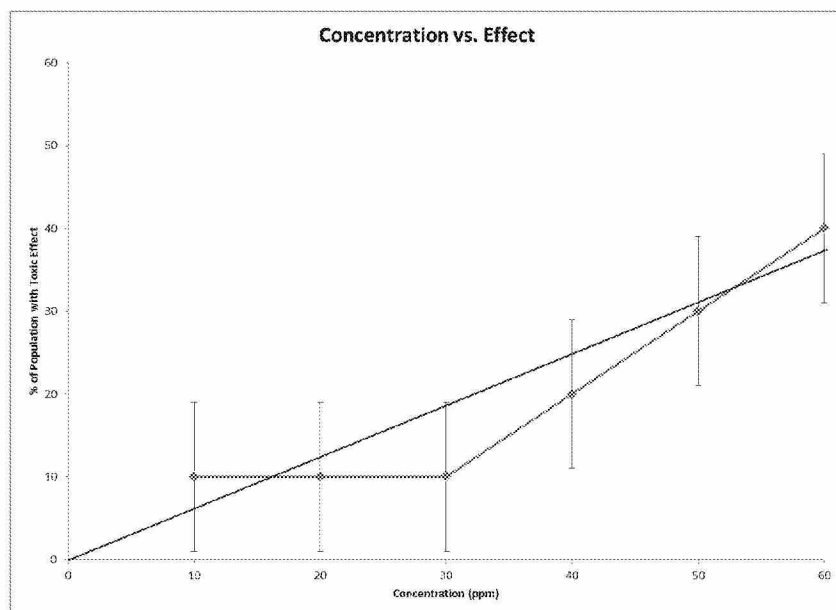
How a Biologist/Toxicologist Sees Data



How a Mathematician Sees Data

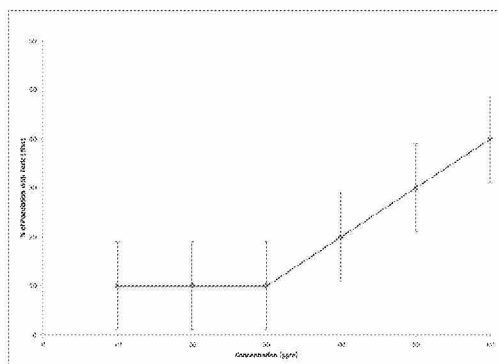


The Difference is Huge



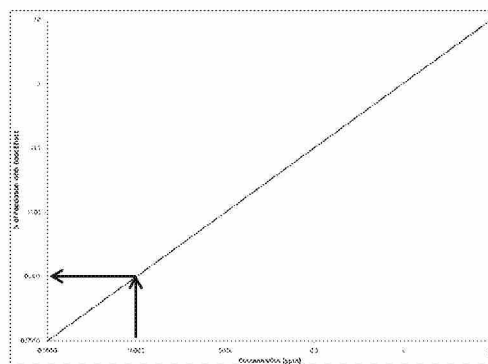
Comparison of Threshold to LNT

Threshold



30 ppm
 0% of population (additional) =
 0 cases of disease due to chemical

LNT Model



0.001 ppm
 0.001% of population =
 3150 cases of disease due to chemical

Effect on Regulations moving from Threshold to LNT

Chemicals of Concern

- Ozone
- PM_{2.5}
- Lead
- Mercury
- Sulfur dioxide (soon)
- Arsenic
- Formaldehyde
- Wave of the future – cumulative risk assessment

Why Continue to Use the LNT?

- Precautionary Principle
- In a large population, someone on the cusp of developing disease; any exposure will push them over the edge
- Policy or ideological decision, not scientific – no empirical evidence for LNT concept
- Made by policy makers (e.g., mathematicians & risk assessors; not toxicologists)

Specific Example, Using the LNT

- Mercury & Air Toxics Standard (MATS)
 - Lowered mercury emissions will prevent 0.00209 IQ point loss per child
 - 0.00209 IQ points x 244,468 children (USEPA estimates would benefit from rule)
 - 511 IQ points “saved” per year
 - 511 IQ points x \$8k to \$12K per IQ point decrease = \$4.2M to \$6.2M benefit from standard
 - IQ may vary as much as 3 to 4 points per child and may change over time or on retesting
 - Can’t measure 0.00209 IQ point difference
 - Can’t aggregate partial IQ points like money

Regulatory Implications of LNT Model

- EPA regulations now rely on LNT for non-cancer chemical effects
- EPA states, on numerous occasions, that chemical regulations are based on science alone (i.e., not policy); opens door for evaluating the science underlying the LNT.
- Recent regulatory actions rely on LNT to assess non-cancer health risks, e.g.,
 - Ozone & mercury based on the Clean Air Act (CAA), i.e., Mercury and Air Toxic Standards (MATS)
 - PM 2.5 regulations

Radiation Data

- Radiation-induced cancer risk still based on atomic bomb survivor data extrapolation (Biological Effects of Ionizing Radiation [NAS BEIR VII] report).
- Substantial data from DOE Low Dose Program (> 700 papers) on radiation-induced mutation & cancer show thresholds for these effects *in vivo*.
- Collective results from DOE (plus other data on radiation & chemicals) demonstrate the LNT:
 - Does not conform with newest experimental data using modern toxicological tools.
 - Is an “*artificial construct*” that needs replacement.

Chemical Data

- Since 1977 great strides in understanding how chemicals & radiation cause effects, e.g., toxicogenomics.
- NAS (2007) *"Toxicity Testing in the 21st Century"* called for new ways to test chemicals using human cells; thresholds obvious.
- Effects in key "adverse outcome" pathways can indicate potential adverse health effects; "computational toxicology"
- As long as LNT remains in place, new methods will never take their proper place in risk assessment

What Is The Social Cost of Carbon?

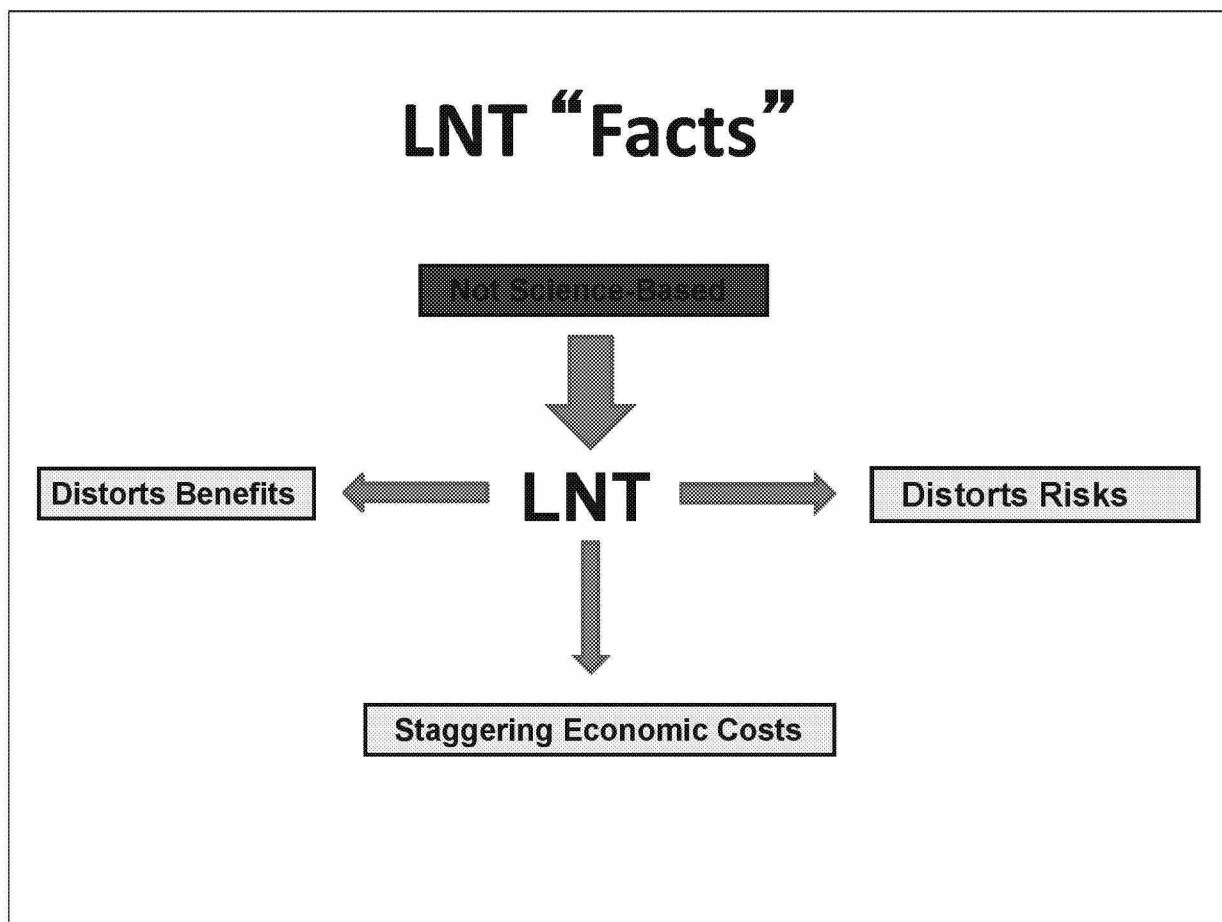
- As the LNT is NOT science-based, its use in economic benefit-cost analysis greatly exaggerates benefits.
- The federal government now assumes a ton of carbon-dioxide emitted in 2013 does roughly \$36 in damage, rather than its previous estimate of \$22, with the value rising each year
- A larger value for the social cost of carbon basically means that any standard or air-pollution regulation that reduces carbon-dioxide emissions will have higher benefits assigned to it.
- That could, in theory, make it easier for stricter standards to pass a cost-benefit analysis test

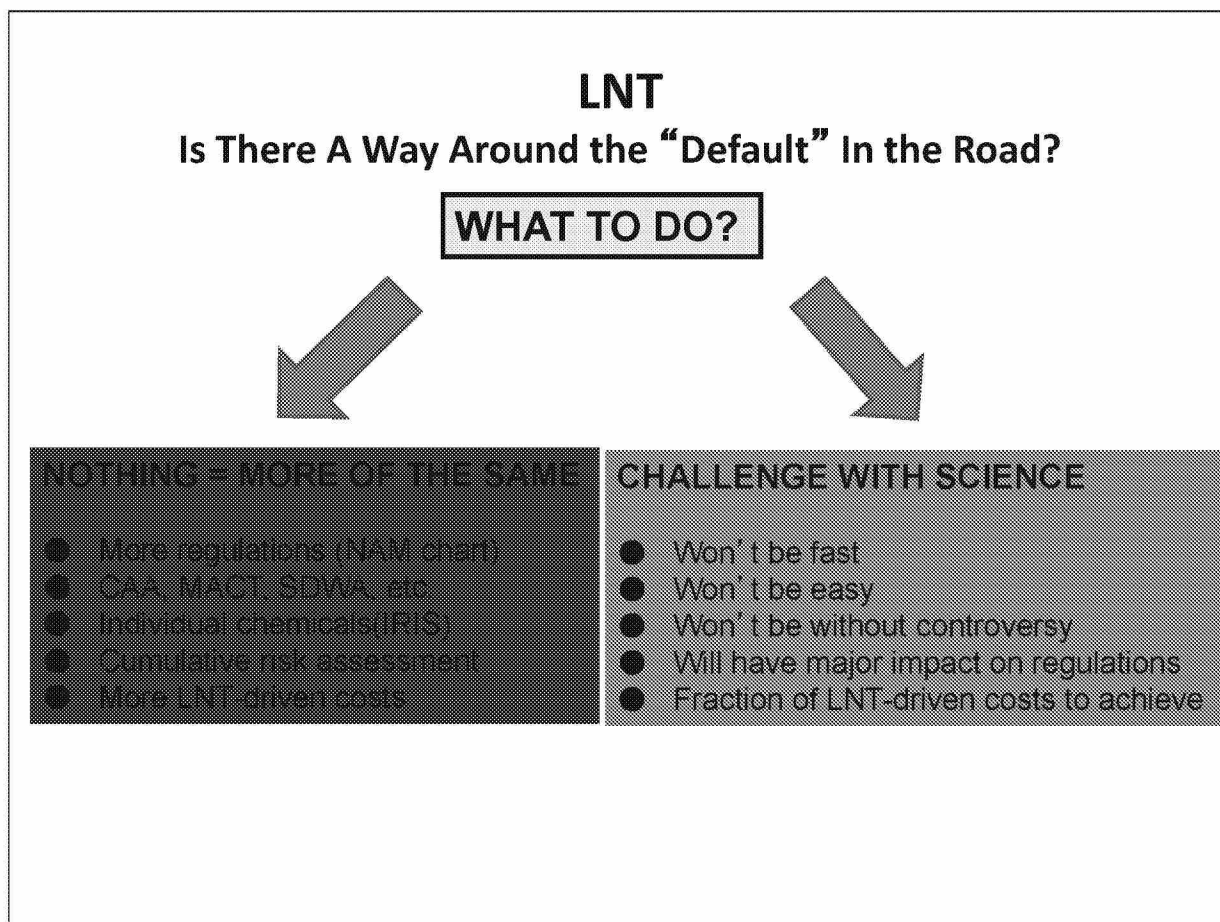
Conclusions (1 of 2)

- Adoption of LNT in 1977 questioned by historical radiation data plus new data for chemicals & radiation
- No empirical data supporting LNT
- Time is ripe for assessing the science of LNT vs. modern data for chemical or radiation risk assessment

Conclusions (2 of 2)

- Assertions that regulations are science-based opens door for assessing LNT science.
- Following sufficient analysis of underlying science, a different NAS committee should address risk assessment for chemicals & radiation without LNT component.





Path Forward

- Three-phased plan to “**ground-truth**” the science of the LNT model vs. threshold approaches
 - Multi-author peer reviewed analysis of relevant scientific data; emphasis on DOE Low Dose data
 - Multi-author peer reviewed economic analysis/case studies with/without LNT-driven “benefits” calculations
 - Advocacy/Communications/Public Outreach
- Congressional hearings

Path Forward

- Appropriations to fund joint DOD/DOE request for NAS to address non-LNT risk assessment approaches
- Widespread support for challenging LNT model
 - Numerous industry trade associations
 - Individual companies
 - State regulatory agencies
 - Animal rights organizations
 - House Energy & Commerce Committee

Contact Information

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Please call or e-mail if you would like to discuss
or have additional information about our LNT
Project

CTC Foundation
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Background Reading Material (1:4)

- **Edward J. Calabrese, Ph.D.**
 - Origin of the linearity no threshold (LNT) dose–response concept
 - How the US National Academy of Sciences misled the world community on cancer risk assessment: new findings challenge historical foundations of the linear dose response

- **Michael Honeycutt, Ph.D.**
 - Comments by Michael Honeycutt, Ph.D., with the Texas Commission on Environmental Quality Regarding the Primary National Ambient Air Quality Standards for Ozone and PM, and the Utility MACT
http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/100411_Honeycutt.pdf
 - The EPA's Pretense of Science: Regulating Phantom Risks, by Kathleen Hartnett White
<http://www.texaspolicy.com/sites/default/files/documents/epa-pretense-of-science-acee-kathleen-hartnett-white.pdf>

Background Reading Material (2:4)

- New York Times Articles
 - E.P.A. Is Expected to Set Limits on Greenhouse Gas Emissions by New Power Plants
http://www.nytimes.com/2013/09/14/us/epa-is-expected-to-set-limits-on-greenhouse-gas-emissions-by-new-power-plants.html?emc=edit_tnt_20130913&tntemail0=y&r=0
 - An Unusual Public Battle Over an Energy Nomination
<http://www.nytimes.com/2013/09/16/business/energy-environment/a-federal-energy-nomination-sets-off-an-unusual-public-battle.html?hpw&r=0>
 - U.S. Coal Companies Scale Back Export Goals
<http://www.nytimes.com/2013/09/14/business/energy-environment/us-coal-companies-scale-back-export-goals.html?ref=business>
 - China's Plan to Curb Air Pollution Sets Limits on Coal Use and Vehicles
<http://www.nytimes.com/2013/09/13/world/asia/china-releases-plan-to-reduce-air-pollution.html?ref=science>
 - Challenges Await Plan to Reduce Emissions
<http://www.nytimes.com/2013/09/21/business/energy-environment/challenges-await-plan-to-reduce-emissions.html?r=0>

Background Reading Material (3:4)

- Greenhouse-Gas Fight Escalates: Administration's Higher Estimate for Cost of Carbon Raises Ire of Critics
http://online.wsj.com/article/SB10001424127887324324404579040950076712782.html?mod=WSJ_hps_sections_news
- The 'Social Cost of Carbon' Gambit
http://online.wsj.com/article/SB10001424127887323566804578551672709633396.html?mod=WSJ_Opinion_LEADTop
- Banning Demon Coal
http://online.wsj.com/article/SB10001424052702303759604579095292685100308.html?mod=WSJ_Opinion_AboveLEFTTop
- An obscure new rule on microwaves can tell us a lot about Obama's climate policies <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/06/05/what-an-obscure-microwave-rule-says-about-obamas-climate-plans/>

Other References

EPA Regulation of Greenhouse Gas Emissions from Existing Power Plants: Issues and Options <http://www.vnf.com/news-alerts-854.html>

Background Reading Material (4:4)

- EPA Proposes New Standards to Regulate Carbon Dioxide Emissions from New Power Plants <http://www.vnf.com/news-alerts-878.html>
- EPA Administrator McCarthy claims that their proposed rules are “science-based”, which is “what” our Project challenges (<http://www.c-spanvideo.org/program/315136-1>)
- Climate Change Policy: What Do the Models Tell Us? Robert S. Pindyck. NBER Working Paper No. 19244. Issued in July 2013. NBER Program(s): EEE PE. www.nber.org/papers/w19244
- “Current State and Future Direction of Coal-fired Power in the Eastern Interconnection”
http://www.naruc.org/Grants/Documents/ICF-EISPC_Coal-Whitepaper-071213_final.pdf
- Reassessing the Human Health Benefits from Cleaner Air
<http://www.cmpa.com/pdf/ReassessingCleanAirAug22.pdf>

Goals of This Presentation

- ✓ Better informed about the non-science based manner by which the US EPA relies on the LNT model for risk assessment of air- and waterborne chemicals
- ✓ Made apparent the exaggerated and unrealistic risks and benefits produced by reliance on the LNT for Clean Air Act-type regulations as well as for individual chemicals
- ✓ Briefly described that there are scientific data that support threshold-based approaches for both chemicals and radiation
- ✓ Strongly emphasized that our proposed Project is the only way that could lead to the elimination of the LNT for risk assessment and benefit/cost calculations

10-20-17
LNT Project Overview

**Revisiting the Scientific Basis of the Linear No Threshold (LNT) Model as
Contrasted with Threshold Models for Cancer Risk Assessment of Radiation
and Chemicals**

While science-based regulations are absolutely necessary to protect public health and safety, effective protection is not achieved by regulatory approaches that lack scientific merit. The single most distorting element of EPA's broad chemical regulatory agenda, including major regulations under the Clean Air Act (CAA) is the LNT model. The same holds true for regulations for the nuclear/radiation sector where the LNT model continues to be the default ignoring the abundant data and thousands of peer reviewed publications documenting the adaptive and other mitigating effects of low dose radiation. Even though the LNT model was originally adopted by the National Academy of Sciences (NAS) in 1956 for radiation and in 1977 for chemicals, it is now known that, even then, there were substantial data demonstrating that this model was of questionable scientific validity. Because LNT-driven regulations, whether for chemicals or radiation, have, for many years, been claimed to be science-based, the underlying scientific foundation for such regulations, particularly the LNT model itself, should also, by definition, reflect empirical data. If such scientific data are lacking, as they are for the LNT model, science-based regulatory methodologies (including benefit-cost analyses) for both chemicals and radiation should be updated to reflect significant advancements in scientific knowledge.

The LNT Project, now well underway, will be conducted in two Phases. The first was the formation of a Science Committee, comprised of 15 individuals in the fields of toxicology, radiation biology, evolutionary biology, epidemiology, risk assessment, and economics. This Committee is in the process of preparing a comprehensive peer-reviewed publication¹ which will compare/contrast the scientific data supporting the LNT model with threshold models for chemical and radiation mutation and carcinogenesis. The focus of the Project will demonstrate that, because there is no scientific support for the LNT model, modern data for threshold models should be the basis for regulations. In particular, the abundant data generated as part of the Department of Energy's Low Dose Radiation Research Program will be a central element of the anticipated publication. Collectively, these and other complementary data have elucidated the cellular defense mechanisms by which humans can withstand exposure to low dose radiation without adverse effects. Since EPA has repeatedly asserted that regulations and models are based on "sound, high quality science," the goal of this effort is to use such data to challenge the scientific legitimacy of the LNT model. With the progress to date, the goal is to have the Committee's report completed and submitted for publication by early 2018.

Following publication of the peer-reviewed report, the next Phase will be the formation of a Communications Committee. This group will generate interest/support for the development of risk assessment methodologies that are science-based and health protective, but do not rely on the LNT model. The ultimate goal would be for a Congressional hearing(s) and subsequent appropriations and funding for a joint DOE/DOD request for a new Committee at NAS (i.e., not BEIR)² to revoke its 1956 endorsement of the LNT and replace it with evidence-based cancer risk assessment approaches for chemicals and radiation that are health protective without having to assume that the LNT model is scientifically valid. A paradigm shift of this magnitude will not be fast, easy or without controversy, but can only occur after the singular goal of this Project is achieved, i.e., to convincingly demonstrate that compared to threshold models, the LNT model is scientifically invalid for purposes of radiation and chemical risk assessment as well as for economic benefit-cost analyses.

¹ A dedicated issue of Critical Reviews in Toxicology with full support from the editor.

² Based on a planning meeting at NAS in November 2015 for the anticipated Committee on the Biological Effects of Ionizing Radiation (BEIR VIII) it was clear the LNT would continue to be the default for radiation risk assessment.